ENVIRONMENTAL CHEMISTS

Date of Report: March 13, 1997 Date Received: March 5, 1997 Project: Metro Grab, PO #M56450 Date Samples Extracted: March 7, 1997 Date Extracts Analyzed: March 11, 1997

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, AND ZINC USING METHOD 6010

Samples Processed Using Method 3005A Results Reported as mg/L (ppm)

Sample ID	Chromium	Copper	<u>Nickel</u>	<u>Zinc</u>
M56450	0.60	0.42	0.53	< 0.05
Method Blank	<0.05	<0.05	<0.05	<0.05

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QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 76412 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromiun	n mg/L (ppm)	0.58	0.58	0	0-20
Copper	mg/L (ppm)	0.51	0.51	0	0-20
Nickel	mg/L (ppm)	0.58	0.58	0	0-20
Zinc	mg/L (ppm)	< 0.05	< 0.05	nm	0-20

Laboratory Code: 76412 (Matrix Spike)

	Reporting	Spike	Sample	%]	Recovery	Acceptance	Relative e Percent
Analyte:	Units	Level	Result	MS	MSD	Criteria	Difference
	e bala alikke sak					The Address of	
Chromium	mg/L (ppm)	. 5	0.58	96	97	80-120	1
Copper	mg/L (ppm)	5	0.51	90	91	80-120	1
Nickel	mg/L (ppm)	10	0.58	95	95	80-120	0
Zinc	mg/L (ppm)	5	< 0.05	97	94	80-120	3

Laboratory Code: Spike Blank

	Reporting	% R	ecovery	Acceptanc	Relative e Percent	
Analyte:	Units	Level	MS	MSD	Criteria	Difference
Chromium	mg/L (ppm)	5	100	98	80-120	2
Copper	mg/L (ppm)	5	95	93	80-120	2
Nickel	mg/L (ppm)	10	101	99	80-120	2
Zinc	mg/L (ppm)	5	101	99	80-120	2

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282

FORMS/COC

SAMPLE CHAIN OF CUSTODY

2-5-97 1:05 PM

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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Beth M. Albertson, M.S. Bradley T. Benson Kelley D. Wilt 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044

March 13, 1997

INVOICE # 97ACU0313-2 DUPLICATE COPY

Accounts Payable Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

RE: Project Metro Grab, PO #M56450: Results of testing requested by Gerry Thompson, Project Manager for material submitted on March 5, 1997.

FEDERAL TAX ID *(b) (6)

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Beth M. Albertson, M.S. Bradley T. Benson Kelley D. Wilt 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044

March 13, 1997

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on March 5, 1997 from your Metro Grab, PO #M56450 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson

Chemist

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Enclosures ACU0313R.DOC